~~Patent claims~~What is claimed is:

1. ~~Method~~ A method for organ-specific image optimization in computed tomography (CT), comprising: ~~(CT) with steps for~~

~~—~~recording a layer of a body with a CT device;

~~—~~creating a first CT image ~~on the basis of~~based upon Hounsfield values (HU values) calculated for the recorded layer of the body;

~~—~~creating an HU-value frequency distribution of the first CT image of ~~this~~ a layer in a histogram;

~~—~~defining at least one organ-specific HU region;

~~—~~allocating an HU-dependent transfer function to the organ-specific HU region; and

~~—~~filtering the first CT image with the HU-dependent transfer function, ~~characterized by further steps for~~:

~~—~~creating a second CT image ~~on the basis of~~based upon the HU values calculated for the recorded layer of the body;

~~—~~filtering the second CT image with the HU-dependent transfer function; and

~~—~~mixing the filtered first CT image with the filtered second CT image.

2. The method as claimed in claim 1, ~~characterized in that~~wherein a first image filter is used to create the first CT image.

3. The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~wherein a second image filter is used to create the second CT image.

4. The method as claimed in claim 1, ~~characterized in that~~wherein a first convolution core is used to create the first CT image.

5. The method as claimed in claim 1 ~~or 4~~, wherein ~~characterized in that a~~ second convolution core is used to create the second CT image.

6. The method as claimed in ~~one of~~ claims 2 ~~to 5~~, ~~characterized in that~~wherein the first CT image is produced as a smoothed CT image.

7. The method as claimed in ~~one of~~ claims ~~2~~6 ~~to 6~~, ~~characterized in that~~wherein the second CT image is produced as a high-contrast CT image.

8. The method as claimed in ~~one of~~ claims 1 ~~to 7~~, ~~characterized in that~~wherein the magnitude of the HU-dependent transfer function moves in an interval between 0 and 1.

9. The method as claimed in ~~one of~~ claims 1 ~~to 8~~, ~~characterized in that~~ wherein the mixing of the first CT image with the second CT image is carried out as a weighted, pixel by pixel addition of the first CT image to the second CT image.

10. The method as claimed in claim 9, ~~characterized in that~~wherein the weighting factor of the first CT image corresponds to the magnitude of the HU-dependent transfer function, and the weighting factor of the second CT image corresponds to the difference between the magnitude of the HU-dependent transfer function and the value 1.

11. The method as claimed in claim 9, ~~characterized in that~~wherein the weighting factor of the first CT image corresponds to the difference between the magnitude of the HU-dependent transfer function and the value 1, and the weighting factor of the second CT image corresponds to the magnitude of the HU-dependent transfer function.

12. The method as claimed in ~~one of~~ claims 1 ~~to 11~~, ~~characterized in that~~wherein, ~~in order~~ to create at least one of the first ~~and~~or second CT image, a two-dimensional separable image filter is used.

13. The method as claimed in one of claims 1 to 11, wherein characterized in that, in order to create at least one of the a first or and second CT image, two one-dimensional image filters are used.

14. The method as claimed in one of claims 1 to 13, wherein characterized in that different HU regions are represented with different windowing.

15. A computed tomography device, comprising:

a computer (8) for processing measured data; and

a monitor (6) for visualizing displaying the data processed by the computer (8), wherein characterized in that the computer (8) is designed to carry out the a method as claimed in one of claims 1 to 14 on the computed tomography device.

16. A computer program product having a series of physical states which are suitable to be implemented by a computing device (8), which is connected to a computed tomography device in such a way that a method as claimed in one of claims 1 to 14 is adapted to can be carried out on the computed tomography device.

17. The method as claimed in claim 2, wherein a second image filter is used to create the second CT image.

18. The method as claimed in claim 4, wherein a second convolution core is used to create the second CT image.

19. The method as claimed in claim 3, wherein the first CT image is produced as a smoothed CT image.

20. The method as claimed in claim 19, wherein the second CT image is produced as a high-contrast CT image.

21. The method as claimed in claim 4, wherein the first CT image is produced as a smoothed CT image.

22. The method as claimed in claim 21, wherein the second CT image is produced as a high-contrast CT image.

23. The method as claimed in claim 5, wherein the first CT image is produced as a smoothed CT image.

24. The method as claimed in claim 23, wherein the second CT image is produced as a high-contrast CT image.

25. A computed tomography device, comprising:

a computer for processing measured data; and

a monitor for displaying the data processed by the computer, wherein the computer is designed to carry out the method as claimed in claim 9 on the computed tomography device.

26. A computer program product having a series of physical states which are suitable to be implemented by a computing device, connected to a computed tomography device in such a way that a method as claimed in claim 9 is adapted to be carried out on the computed tomography device.

27. A method for organ-specific image optimization in computed tomography (CT), comprising:

creating a first and second CT image based upon Hounsfield values (HU values) calculated for a layer of a body previously with a CT device;

creating an HU-value frequency distribution of the first CT image of a layer in a histogram;

assigning an HU-dependent transfer function to at least one organ-specific HU region;

filtering the first and second CT image with the HU-dependent transfer function; and

mixing the filtered first CT image with the filtered second CT image.

28. The method as claimed in claim 27, wherein the mixing of the first CT image with the second CT image is carried out as a weighted, pixel by pixel addition of the first CT image to the second CT image.

29. The method as claimed in claim 28, wherein the weighting factor of the first CT image corresponds to the magnitude of the HU-dependent transfer function, and the weighting factor of the second CT image corresponds to the difference between the magnitude of the HU-dependent transfer function and the value 1.

30. The method as claimed in claim 28, wherein the weighting factor of the first CT image corresponds to the difference between the magnitude of the HU-dependent transfer function and the value 1, and the weighting factor of the second CT image corresponds to the magnitude of the HU-dependent transfer function.

31. A computed tomography device, comprising:

a computer for processing measured data; and

a monitor for displaying the data processed by the computer, wherein the computer is designed to carry out the method as claimed in claim 27 on the computed tomography device.

32. A computer program product having a series of physical states which are suitable to be implemented by a computing device, connected to a computed tomography device in such a way that a method as claimed in claim 27 is adapted to be carried out on the computed tomography device.